Impact of Credit Risk Management on the Performance of Selected Nigerian Banks

E. Chuke Nwude[1]*, Chinedu Okeke[2]

[1]Department of Banking and Finance, Faculty of Business Administration, University of Nigeria Nsukka, Enugu Campus, Nigeria.
[2]Zenith Bank, Central Business District, Abuja, Nigeria. *Email: chuke.nwude@unn.edu.ng

ABSTRACT

This study investigated the impact of credit risk management on the performance of deposit money banks in Nigeria using five banks that had highest asset base. Ex-post facto research design was adopted using dataset for the period 2000–2014 collated from the annual reports and financial statement of the selected deposit money banks. Three hypotheses were proposed and tested using ordinary least square regression model. The findings reveal that credit risk management had a positive and significant impact on total loans and advances, the return on asset and return on equity of the deposit money banks. The study recommended that bank managers need to put more efforts to control the non-performing loan by critically evaluating borrowers' ability to pay back. The regulator should strengthen its monitoring capacity in this regard.

Keywords: Credit Risk, Bank Performance, Risk Management, Return on Equity, Return on Asset, Non-performing Loans
JEL Classifications: G21, G32

1. INTRODUCTION

For every endeavor that involves the mortal being there is risk. Financial institutions are piloted by human beings and therefore incur challenges for a multitude of reasons, some of the major causes of such problems continues to be directly related to lax credit standards for borrowers and counter parties, poor portfolio risk management, lack of attention to changes in economic or other circumstances that can lead to a deterioration in the credit standing of a bank's counter parties. Banks use customers deposit to generate credit for their borrowers, which in fact is a revenue generating activity for banks. This credit creation process exposes the banks to high default risk which might lead to financial distress including bankruptcy. Banking industry is no doubt the most regulated sector in any economy because of the riskiness of its operation. As a result risk management in banks is a discipline every participants and players in the industry need to align with. This is why the subject of risk occupies a central position in the business decisions of bank management. Investors and the general public to a large extent approach banks for loans and advances in large volumes which constitute risk- assets of banks and necessitate the need for provisioning against them.

As long as there is risk there is need for risk management. Risk management is the identification, assessment, and prioritization of risks followed by coordinated and economical application of resources to minimize, monitor and control the probability and impact of unfortunate events. Deposit money banks assume various kinds of risks in the process of providing financial services as lending is the core business activity of banks. The loan portfolio is typically the largest asset and the predominant source of revenue to banks and also one of the greatest sources of risk to a bank's safety and soundness. At the core of credit extension in the banking industry risk management is seen as the process of identifying risks, assessing their implications, deciding on a course of action, and evaluating the results. Effective risk management seeks to maximize the benefits of a risky situation while minimizing the negative effect of the risk. Adequate management of credit risk in financial institutions is critical for their survival and growth. To accomplish this, the bank management must have a thorough knowledge of each portfolio composition or mix, industry and geographic concentrations of credits, average risk ratings, and other aggregate characteristics. They must be sure that the policies, processes, and practices implemented to control the risks of individual loans and portfolio segments are sound and that lending

personnel adhere to them. Many Nigerian banks had failed in the past due to inadequate management of their risk exposure. The problem has continued to affect the industry with serious adverse consequences as banks are generally subject to wide array of risks in their business operations. Against this background, the need to empirically examine the impact of credit risk management on the performance of selected deposit money banks in Nigeria becomes necessary.

In this regard the main objective of this study is to critically evaluate the effect of credit risk management on the performance of selected Nigerian commercial banks. In line with this, the specific objectives of the study are to ascertain the impact of credit risk management on (i) total loans and advances (ii) return on assets (ROAs) (iii) return on equity (ROE) of the selected deposit money banks in Nigeria.

In line with the specific objectives the study will seek to provide solutions to the research questions such as, to what extent has credit risk management affected (i) total loans and advances (ii) ROAs (iii) ROE of the selected deposit money banks in Nigeria?

As a follow-up to the research questions raised above, the following hypotheses were tested. H_1: Credit risk management has no positive and significant impact on (i) total loans and advances (ii) ROAs (iii) ROE of the selected deposit money banks in Nigeria.

The study focused on the impact of credit risk management on some of the profitability indices of selected deposit money banks in Nigeria. The study period covered is 2000–2014. The five banks with highest asset base were selected which are First Bank of Nigeria plc, United Bank for Africa (UBA), Diamond Bank plc, Zenith Bank plc and Guaranty Trust Bank (GTBank) plc. The base year 2000 was chosen because the transition to democratic civilian government came into being on May 29, 1999 with full year effect from 2000. The year 2000 started a new environment for banking practice in Nigeria.

This study will be of immense benefit to both the selected banks and other banks' management in observing the weight credit risk management exerts on the selected performance indices of banks. This is likely to spur them to critical review of their credit risk management styles. The findings will enable investors and general banking public to place judgment on the bank management in terms of leadership capacity having observed the level of non-performing loans (NPLs) in the banks, total asset value, ROAs, and ROE. Essentially, the results of the study can provide an input reference document for further researches in evaluation of risk management. It also provides policy makers more insight into risk management and guide them in policy making, implementation monitoring.

2. LITERATURE REVIEW

2.1. Conceptual Review

The perspectives of risk differ and risk definition depends on and affected by the risk observer. Hillson (2002) states that the way risk is perceived influences the manner in which it is handled. To

Kannan and Thangavel (2008), risk implies exposure to uncertainty or threat. Risk sometimes entails some economic benefits as firms may derive considerable gains by taking risk. Kaye and Lowe (2010) are of the view that risk is integral to opportunities and threats which may adversely affect an action or expected outcome. Drucker (1977) submits that business grows through greater risk taking. Hillson and Murray-Webster (2011) see risk as 'uncertainty that matter' in business enterprise. In support of Drucker (1977) and Hillson and Murray-Webster (2011), Olajide (2013) explains that recent economic volatility gives risk management a new focus and eminence. They are of the opinion that getting rid of risk can undermine the source of value creation which truncates potential opportunities.

Bakpo and Kabari (2009) stressed that one of the most important decision problems that require serious attention is granting of loans by a financial institution. According to Idowu and Awoyemi (2012), liquidity risk, market risk, foreign exchange risk and solvency risk are the most applicable risk to the banks. In accordance with Basel II accord, credit risk, market risk, and operational risk are types of risks usually found in the banking organization. (a) Credit risks also known as default risk, is one of the oldest. It is the most vital forms of risk faced by banks as financial intermediaries (Broll et al., 2002). It is the potential loss arising from the failure of a borrower to meet its obligations in accordance with agreed terms. (b) Market risks is risk in volatility in the market that affects the bank's return. It is the risk of loss from adverse movement in financial market rates (interest and exchange rate, bond, equity or commodity prices). A bank's market risk exposure is determined by both the volatility of underlying risk factors and the sensitivity of the bank's portfolio to movements in those risk factors (Zahangir and Masukujj, 2011). (c) Operational risk is the potential financial loss as a result of breakdown in day to day operational processes. It can arise from failure to comply with policies, laws and regulations, from fraud or forgery. These include direct and indirect laws resulting from inadequate or frail internal processes, people and systems or from external event. Moreover, Nigerian Deposit Insurance Corporation (2009) stressed that insider abuse is perhaps the most significant factor that led to bank failure. Many owners and directors abused or misused their privileged positions or breached their fiduciary duties by engaging in self-serving activities. The abuses included granting of unsecured credit facilities to owners, directors and related companies which in some cases were in excess of their banks statutory lending limits in violation of the provisions of the banks and other financial institutions act (BOFIA) of 1991 as amended; granting of interest waivers on non-performing insider-credits without obtaining CBN prior approval as required by BOFIA; diversion or conversion of banks resources to service their other business interests such as allocation of foreign exchange without Naira cover to insiders which later crystallized as hard-core debts; compelling their banks to directly finance trading activities either through the banks or other proxy companies, the benefits of which did not accrue to the banks. Where losses were incurred, they were passed to the banks.

Credit risk management provides a clear and structured approach to identifying, measuring and prioritizing risks in order to take

appropriate actions to minimize losses. An effective credit risk management (ECRM) practice does not eliminate risks, but minimize risks. The implementation and maintenance of ECRM warrants firm commitment to improve the efficiency of business processes. The efficiency can attracts some benefits like (i) saving resources: Time, assets, income, property and personnel; (ii) Protection of an organization reputation and public image; (iii) prevention or reduction of legal liabilities; (iv) increasing the stability of operations and promoting continuous improvement; (v) protecting people and environment from harm; (vi) avoiding fines for corporate non-compliance with regulations and legislation; (vii) enhancing the ability to prepare for unforeseen and unexpected circumstances; (viii) enhancing competitive advantage through improved decision support and market intelligence based on more accurate risk-adjusted management information; (ix) improved shareholder value and confidence, which is especially valuable in times of crisis when shareholder trust is stressed to its maximum limits; and (x) assisting in clearly defining suitable risk management techniques, including insurance needs (Meulbroek, 2002; Hillson, 2006; Protiviti Inc., 2006).

In the case of banks, according to Abdullahi (2013), the issue of credit risk is even of greater concern because of the higher level of perceived risks resulting from some of the characteristics of clients and business conditions that they find themselves in, which needs thorough empirical examinations. Sequel to this, Olalekan and Adeyinka (2013) pointed out that while banks are expected to absorb the losses from the normal earnings, there may be some unanticipated losses which cannot be absorbed by normal earnings.

Credit risk management is critical to every business and especially to banks whose stock is cash.

The main profitable activity of the bank is lending money and the underlying principle of lending is risk mitigation, which goes with determining a borrower's ability and propensity to repay the loaned amount. Credit risk management starts with assessing the likelihood of credit risk; determining this risk involves reviewing the borrower's past credit history and earned income. Someone with a good credit rating poses less of a risk than someone with a poor credit history. It is therefore, inevitably not possible to separate banking with credit risk management; which has to be a continuous process and implemented wherever banking business exist. Effective credit-risk management requires financial managers or risk manager to have in depth understanding of the corporate financial risks and how they interrelate with credit risk. This demands analysis of the business environment in which the bank operate and the assessment of the credit risk in terms of likelihood and impact on the entity`s loan portfolio and profitability. The assessment avails important information to banks necessary to identify, measure, monitor and control credit risk as well as to determine that they hold adequate capital against these risks and that they are adequately compensated for risks incurred.

2.2. Theoretical Review

Profitability is one of the ultimate goals of banks and so all strategies and activities are designed to realize this grand objective. As banks increases and maximizes its profits, it must either

increases risk or lower its operating cost. Banks make money from a series of activities of borrowing and deposits but the occurrence of NPLs and advances is considered as losses to the bank. Higher NPL means higher losses, which adversely influence the banks available capital for further borrowing and hence the efficiency of banks investment is affected, further influencing the profitability. NPLs can be attributed to both macroeconomic conditions and banks specific factors. Excessive risk taking valued by loans-to assets ratio and growth rate of banks loans can as well lead to high NPLs. Profitability will generally vary directly with riskiness of bank's portfolio and operations. As a result in order to increase the return, banks need to know which risk factors have greater impact on profitability which eventually leads to bank financial performance.

Saunders and Cornett (2005) stated that the pervasive incidence of non-performing loan is one of the prime causes of failure in the banking system. The very nature of the banking business is so sensitive because more than 85% of their liability is deposits from depositors. While banks engage in lending as main source of income, they are at the same time exposed to various risks which if not properly analyzed and managed could threaten its continued existence. Even though the survival of any bank depends largely on its effective risk management strategies, some bank executives do neglect this aspect of bank job purely for selfish motives. Soyemi et al. (2014) emphasized that excessive and poorly managed risk can no doubt lead to losses and thus endanger the safety of a bank's depositors. Once risks have been identified, they should be measured in order to determine their impact on the banking institution's profitability and capital. This can be done using various techniques ranging from simple to sophisticated models. Accurate and timely measurement of risk is essential to effective risk management systems.

Studies on the influence credit risk management practices on financial performance have been largely conceptual drawing on the theoretical frameworks provided by institutional regulators. Tandelilin et al. (2007), Rivard and Thomas (1997), Li (2007) and Kim and Santomero (1998) opine that a major objective of bank management is to increase shareholders' return as an index of bank performance. They maintain that this objective often comes at the cost of increasing risk. They detailed bank risks to include interest risk, market risk, credit risk, off-balance risk, technology and operational risk, foreign exchange risk, country risk, liquidity risk, and insolvency risk. The bank's motivation for risk management comes from those risks which can lead to bank underperformance. Schroeck (2002), Nocco and Stulz (2006) in Ariffin and Kassim (2009) stress the importance of good risks management practices to maximize firms' value. While the former proposes that ensuring best practices by instituting effective and prudent risk management practices: Increase earnings, the latter specifically posits that effective enterprise risk management have a long-run competitive advantage to the firm (or banks) compared to those that manage and monitor risks individually. In the light of this and as a follow-up, a holistic approach is suggested in managing risk.

According to Bikker (1999) and Kosmidou (2008) concept of bank performance can be expressed in multidimensional ways which

include competition, concentration, efficiency, productivity and profitability. These are the multidimensional nature of the concept of bank performance which calls for wide range of its measures. However the most frequently used measure of banking profitability are ROA, ROE ratio and net interest margin (NIM). Despite the fact that ROE is still the primary performance measure for the most investors and analyst, sometimes ROAs provides a better understanding of a company performance as pointed out by Hagel et al. (2010). Besides some experts consider that a single - ratio cannot be a good proxy for bank performance due to the complex operational environment of banks (Yang, 2012).

2.3. Empirical Review

Credit risk is a serious threat to the performance of banks and as a result various researchers have examined the impact of credit risk on banks in varying dimensions. Hakim and Neamie (2001) as documented in Ariffin and Kassim (2009) examine credit risk and bank's performance in Egypt and Lebanon banks in the 1990s by using data for banks from the two countries over the period 1993–1999, the study estimates an ordinary least squares regression (OLS) model of bank return with varying intercepts and coefficients. The findings show that credit variable is positively related to profitability, while liquidity variable is insignificant across all banks and have no impact on profitability. The study also finds a strong link between capital adequacy and commercial bank return, with high capitalization being the hindrance to return. The study concludes that the capital is a sunk cost with large banks realizing high profits in absolute but not in percentage terms. Burner (2010) observed that a reduction in real risk-free rates of interest to historically low levels led to credit expansion in a ferocious search for yield among investors. Major financial crisis around the world can be attributed to inordinate ambition to return excellent return to their owners by decision makers and the board thereby taking excess risk to boost stock prices. Adeusi et al. (2013) focused on the association of credit risk management practices and bank financial performance in Nigeria. Using a secondary data for 10 banks and for four years reported an inverse relationship between financial performance of banks and doubtful loans, capital asset ratio was found to be positive and significant. Similarly it suggests that the higher the managed funds by banks, the higher the performance. The study concludes a significant relationship between banks performance and risk management. Hence, the need for banks to practice prudent risks management in order to protect the interests of investors. Kargi (2011) evaluated the impact of credit risk on the profitability of Nigerian banks. Financial ratios as measures of bank performance and credit risk were collected from the annual reports and accounts of sampled banks from 2004 to 2008 and analyzed using descriptive, correlation and regression techniques. The findings revealed that credit risk management has a significant impact on the profitability of Nigerian banks. It concluded that banks' profitability is inversely influenced by the levels of loans and advances, NPLs and deposits thereby exposing them to great risk of illiquidity and distress.

Epure and Lafuente (2012) examined bank performance in the presence of risk for Costa-Rican banking industry during 1998–2007. The results showed that performance improvements follow regulatory changes and that risk explains differences in

banks and NPLs negatively affect efficiency and ROAs while the capital adequacy ratio has a positive impact on the NIM. Kithinji (2010) assessed the effect of credit risk management on the profitability of commercial banks in Kenya. Data on the amount of credit, level of NPLs and profits were collected for the period 2004–2008. The findings revealed that the bulk of the profits of commercial banks are not influenced by the amount of credit and NPLs, therefore suggesting that other variables other than credit and NPLs impact on profits. Kolapo et al. (2012) investigated the relationship between bank performance and credit risk management using panel data regression for the period 2000–2010. It could be inferred from their findings that ROE and ROAs both measuring profitability were inversely related to the ratio of non-performing loan to total loan of financial institutions thereby leading to a decline in profitability.

Ahmad and Ariff (2007) examined the key determinants of credit risk of commercial banks on emerging economy banking systems compared with the developed economies. The study found that regulation is important for banking systems that offer multi-products and services; management quality is critical in the cases of loan-dominant banks in emerging economies. An increase in loan loss provision is also considered to be a significant determinant of potential credit risk. The study further highlighted that credit risk in emerging economy banks is higher than that in developed economies. Ben-Naceur and Omran (2008) in attempt to examine the influence of bank regulations, concentration, financial and institutional development on commercial banks' margin and profitability in Middle East and North Africa (MENA) countries from 1989 to 2005 found that bank capitalization and credit risk have positive and significant impact on banks' NIM, cost efficiency and profitability.

Al-Khouri (2011) assessed the impact of bank's specific risk characteristics, and the overall banking environment on the performance of 43 commercial banks operating in 6 of the Gulf Cooperation Council countries over the period 1998–2008. Using OLS regression analysis, results showed that credit risk, liquidity risk and capital risk are the major factors that affect bank performance when profitability is measured by ROAs while the only risk that affects profitability when measured by ROE is liquidity risk.

Ahmed et al. (1998) in their study found that loan loss provision has a significant positive influence on NPLs. Therefore, an increase in loan loss provision indicates an increase in credit risk and deterioration in the quality of loans consequently affecting bank performance adversely. Furthermore, Hakim and Neamie (2001) also as documented in Ariffin and Kassim (2009) examine credit risk and bank's performance in Egypt and Lebanon banks in the 1990s by using data for banks from the two countries over the period 1993–1999, the study estimates a fixed effects model of bank return with varying intercepts and coefficients. The findings show that credit variable is positively related to profitability, while liquidity variable is insignificant across all banks and have no impact on profitability. The study also finds a strong link between capital adequacy and commercial bank return, with high capitalization being the hindrance to return. The study concludes that the capital is a sunk cost with large banks realizing high profits in absolute but not in percentage terms.

Another dimension is offered by Bruner (2010) on taking excessive risk to boost performance. Burner (2010) observed that a reduction in real risk-free rates of interest to historically low levels led to credit expansion in a ferocious search for yield among investors. He attributes major financial crisis around the world to inordinate ambition by decision makers and the board of directors to return excellent return to their owners which push them to taking excess risk to achieve this objective. Hosna et al. (2009) reemphasized the effect of credit risk management on profitability level of banks. They concluded that higher capital requirement contributes positively to bank's profitability. Muhammed et al. (2012) used descriptive, correlation and regression techniques to study whether credit risk affect banks performance in Nigeria from 2004 to 2008. They also found that credit risk management has a significant impact on profitability of Nigerian banks. Boahene et al. (2012) used regression analysis to determine whether there is a significant relationship between credit risk and profitability of Ghanaian banks. They followed the line of Hosna et al. (2009) by using ROE as a measure of bank's performance and a ratio of NPLs to total asset as proxy for credit risk management. They found empirically that there is an effect of credit risk management on profitability level of Ghanaian banks. The study also suggests that higher capital requirement contributes positively to bank's profitability.

Liyuqi (2007) examined the determinants of bank's profitability and its implications on risk management practices in the United Kingdom. The study employed regression analysis on a time series data between 1999 and 2006. Six measures of determinants of bank's profitability were employed. He proxied internal determinants of bank's performance as liquidity, credit and capital. GDP growth rate, interest rate and inflation rate were used as external determinants of banks profitability. The six variables were combined into one overall composite index of bank's profitability. ROA was used as an indicator of bank's performance. It was found that liquidity and credit risk have negative impact on bank's profitability. Poudel (2012) appraised the impact of the credit risk management in bank's financial performance in Nepal using time series data from 2001 to 2011. The result of the study indicates that credit risk management is an important predictor of bank's financial performance. Fredrick (2010) also demonstrated that credit risk management has a strong impact on bank's financial performance in Kenya. Meanwhile, Jackson (2011) towed the line of Fredrick (2010) by using CAMEL indicators as independent variables and ROE as a proxy for banks performance. His findings were also in line with that of Fredrick who also concluded that CAMEL model can be used as proxy for credit risk management. Musyoki and Kadubo (2011) also found that credit risk management is an important predictor of bank's financial performance. They concluded that banks success depends on credit risk management. While analyzing the credit risk management efficiency in Nigerian commercial banking sector from 2004 through 2009, Onaolapo (2012) provides some further insight into credit risk management as profit enhancing mechanism. They used regression analysis and found rather an interesting result that there is a minimal causation between deposit exposure and bank's performance. Muhammed et al. (2012) used descriptive, correlation and regression techniques to study whether credit risk affect banks performance in Nigeria from 2004 to 2008.

They also found that credit risk management has a significant impact on profitability of Nigerian banks.

2.4. Review Summary
Several works motivated this research though as highlighted in the empirical review. Among such works are Adeusi et al. (2013), Boahene et al. (2012), Epure and Lafuente (2012), Kolapo et al. (2012), Muhammed et al. (2012), Onaolapo (2012), Poudel (2012), Al-Khouri (2011), Jackson (2011), Kargi (2011), Musyoki and Kadubo (2011), Fredrick (2010), Hosna et al. (2009), Ariffin and Kassim (2009), Liyuqi (2007) and Hakim and Neamie (2001) who with regression analysis found significant relationship between credit risk management and profitability of banks. They mainly employed ROE and ROA as measures of bank performance and a ratio of NPLs to total asset as proxy for credit risk management.

Even though the survival of many banks depends on its effective risk management strategies, only few studies have actually investigated concepts of risk management in deposit money banks with the aim of statistically determining their impact on bank performance in Nigeria. More so, the relationships that exist between risk management and bank performance have not received the desired attention in finance literatures. The need to fill the aforementioned knowledge gaps justifies the relevance of this study. Against this background, the need to carry out this research becomes necessary in order to objectively and empirically examine the impact of risk management and the performance of Nigerian deposit money banks.

3. METHODOLOGY

The research design adopted in this study is the *ex post facto* and analytical design. The data set is secondary data obtained from the Central Bank of Nigeria statistical bulletins and annual reports of the five selected banks (Diamond, First, GTB, UBA and Zenith). The study borrowed its analytical model from the work of Kaaya and Pastory (2013) which examined Credit Risk and Commercial Banks Performance in Tanzania. The linear regression employed by the authors is of the form:

$$Y=\alpha+\beta_1 X+\mu \qquad (1)$$

Where Y=ROA (as measure of bank profitability), X=Impaired loans, β=Coefficient of the independent variable, μ=Error term. Models for this study will be patterned after the above model but with introduction of a control variable, natural logarithm of total asset. The functional relationships for hypotheses one, two and three are therefore specified as follows:

$$\text{Hypothesis one: } TLAR=\alpha+\beta_1 NPLR+\beta_2 NLTA+\mu \qquad (2)$$

$$\text{Hypothesis two: } ROA=\alpha+\beta_1 NPLR+\beta_2 NLTA+\mu \qquad (3)$$

$$\text{Hypothesis three: } ROE=\alpha+\beta_1 NPLR+\beta_2 NLTA+\mu \qquad (4)$$

In writing the model equation, the following symbols were used to denote our respective variables. Return on asset=ROA, return on

equity=ROE, NPLa/total loans=NPLR, total loans and advances/total asset=TLAR, natural log of total asset=NLTA.

3.1. Dependent Variables
ROE and ROAs are two measures for deposit money banks' profitability. The data used to calculate these two ratios are retrieved from the annual reports and financial statements of the selected commercial banks between the periods 2000 and 2014.

ROA=Earnings before interest and tax/total asset while ROE=Earnings after interest and tax/Shareholders' funds. Total loans and advances ratio (TLAR) is one of our independent variables and is calculated as the ratio of total loans and advances to total assets. It is an indicator of how loans and advances are covered by the total assets.

3.2. Independent Variable
NPLs ratio (NPLR) is an indicator that measures credit risk management. NPLs can be defined as a sum of borrowed money upon which the debtor has not made his or her scheduled payments for at least 90 days. A nonperforming loan is either in default or close to being in default. NPLR=Total NPLs and advances/total Loans and advances.

3.3. Control Variables
Natural logarithm of total asset is usually used as proxy for bank size. Since every other variable in our model equations are in ratios, we find it necessary to logarithmize the absolute value of the total assets to bring all the variables to equal base. We transformed to natural log simply because our best results during the preliminary tests are based on that transformation after several trials.

3.4. Techniques of Analysis
The objective of this study is to examine the impact of credit risk management on selected deposit money banks in Nigeria for the period 2000–2014. To achieve this objective the OLS regression was used in analysis. The use of linear regression helps to determine the effect of the independent variable(s) on the dependent variable and to what degree. In other words, it determines both direction and magnitude of the relationships. Data collected were presented with the aid of tables. Diagnostic tests such as for normality and unit root were carried out.

4. DATA PRESENTATION AND ANALYSIS

4.1. Data Presentation
Table 1 presents the data from annual reports and statement of accounts of selected deposit money banks namely Diamond, First bank, GTBank, UBA and Zenith bank while Table 2 contains the descriptive statistics of the variables.

4.2. Preliminary Tests
4.2.1. Test for normality
To confirm if the data set assume a pattern of standard normal distribution we utilized the Jarque-Bera (JB) statistic. Table 2 showed that all the variables are normally distributed as the p-values are greater than the critical value of 0.05 and all right-

Table 1: Computed data of selected deposit money banks

Bank	Year	ROA	ROE	NPLR	TLAR	TA (N'million)
Diamond	2000	0.0092	0.7484	0.0133	0.0199	110,994,950
	2001	0.0260	1.2162	0.1664	0.2003	115,047,860
	2002	0.0261	1.0854	0.2331	0.1046	118,249,720
	2003	0.0269	0.9340	0.0811	0.2133	120,326,540
	2004	0.2630	0.9365	0.0633	0.1266	122,004,950
	2005	0.0281	0.8482	0.273	0.3173	124,994,957
	2006	0.2370	1.0125	0.0659	0.2702	223,047,862
	2007	0.0281	1.4746	0.0722	0.382	312,249,721
	2008	0.2490	1.7967	0.0132	0.2761	603,326,540
	2009	−0.0149	−0.6747	0.0087	0.3074	604,000,914
	2010	0.0172	0.9011	0.0751	0.4833	548,402,560
	2011	−0.0380	−3.1596	0.0185	0.5005	714,063,959
	2012	0.0267	3.1879	0.0166	0.1275	1,059,173,257
	2013	0.0245	4.1110	0.021	0.1208	1,354,930,871
	2014	0.0139	1.9047	0.0324	0.1332	1,750,270,423
First	2000	0.0293	6.3612	0.02601	0.1427	256,500,000
	2001	0.0330	7.9285	0.182	0.2457	275,450,000
	2002	0.0387	6.0319	0.0635	0.312	284,650,000
	2003	0.0395	6.4648	0.2241	0.255	302,456,000
	2004	0.0451	6.3369	0.205	0.0514	312,490,000
	2005	0.0401	6.1659	0.3024	0.3038	377,496,000
	2006	0.0367	5.3718	0.0718	0.3252	540,129,000
	2007	0.0289	3.1254	0.0791	0.2873	762,881,000
	2008	0.0326	3.0641	0.0112	0.321	1,165,461,000,
	2009	0.0276	2.8212	0.0091	0.3451	1,667,422,000
	2010	0.0170	1.9688	0.0882	0.5184	1,962,444,000
	2011	0.0213	2.9089	0.0249	0.4582	2,463,543,000
	2012	0.0300	4.3603	0.0142	0.1188	2,770,675,000
	2013	0.0236	3.6384	0.0231	0.1132	3,246,577,000
	2014	0.0197	0.3483	0.1579	0.144	3,586,433,000
GTB	2000	0.0195	0.9364	0.1032	0.2001	102,500,080
	2001	0.0264	1.2756	0.2203	0.2309	110,865,000
	2002	0.0251	1.5756	0.0913	0.1331	125,400,000
	2003	0.0324	1.5416	0.0833	0.2441	132,500,000
	2004	0.0394	2.2888	0.1332	0.1503	154,800,000
	2005	0.0417	1.7769	0.2909	0.2874	167,897,704
	2006	0.0328	2.8925	0.0631	0.306	305,080,565
	2007	0.0320	3.2532	0.0802	0.2643	478,369,179
	2008	0.0390	0.2364	0.024	0.2896	963,118,828
	2009	0.0324	0.2227	0.0122	0.3645	1,078,177,585
	2010	0.0407	3.3726	0.0911	0.4963	1,168,052,897
	2011	0.0402	3.5101	0.0262	0.5001	1,608,652,646
	2012	0.0618	5.7941	0.0295	0.1254	1,620,317,223
	2013	0.0527	5.8132	0.0199	0.1097	1,904,365,795
	2014	0.0518	6.3491	0.0432	0.217	2,126,608,312
UBA	2000	0.0053	0.9242	0.0344	0.2561	178,500,000
	2001	0.0074	1.3352	0.0165	0.2433	195,580,000
	2002	0.0092	1.4594	0.0233	0.1772	201,305,000
	2003	0.0115	2.0053	0.0732	0.1009	201,150,000
	2004	0.0142	2.7202	0.1332	0.2441	225,000,000
	2005	0.0253	3.0411	0.2702	0.3306	248,928,000
	2006	0.0147	3.2458	0.0511	0.2642	851,241,000
	2007	0.0259	3.4500	0.0663	0.2497	1,102,348,000
	2008	0.0359	4.6395	0.0202	0.2861	1,520,093,000
	2009	0.0113	1.1958	0.0044	0.3222	1,400,879000
	2010	0.0060	0.1675	0.0669	0.4638	1,432,632000
	2011	−0.0002	−1.013	0.0301	0.3895	1,655,465,000
	2012	0.0238	2.8727	0.0115	0.1773	1,933,065,000
	2013	0.0233	2.8186	0.0256	0.1241	2,217,714,000
	2014	0.0181	2.4305	0.0344	0.1339	2,338,858,000
Zenith	2000	0.0100	0.7871	0.0322	0.1335	186,500,000
	2001	0.0122	1.1513	0.1662	0.2633	205,896,000
	2002	0.0170	1.1860	0.0144	0.2447	225,980,000
	2003	0.0211	1.9880	0.0413	0.3115	265,800,000

(Contd...)

Table 1: *(Continued)*

Bank	Year	ROA	ROE	NPLR	TLAR	TA (N'million)
	2004	0.0255	2.2712	0.2113	0.1993	296,500,000
	2005	0.0277	2.3853	0.2774	0.2909	329,716,511
	2006	0.0249	2.5047	0.0691	0.2541	608,505,175
	2007	0.0263	3.7794	0.0555	0.3136	883,940,926
	2008	0.0291	5.5569	0.0214	0.288	1,680,302,005
	2009	0.0177	1.4622	0.0143	0.3325	1,789,458,000
	2010	0.0273	2.1235	0.0754	0.4407	1,573,196,000
	2011	0.0263	2.6309	0.0218	0.3891	2,169,073,000
	2012	0.0385	6.1028	0.0119	0.1452	2,436,886,000
	2013	0.0326	5.3136	0.0185	0.1067	2,878,693,000
	2014	0.0355	6.3402	0.02771	0.2331	2,987,600,000

Source: Computations from annual reports and statement of accounts of selected deposit money banks, ROA: Return on asset, ROE: Return on equity, NPLR: Non-performing loan ratio, TLAR: Total loans and advances ratio

Table 2: Descriptive statistics of computed data of selected deposit money banks

Indices	ROA	ROE	TLAR	NPLR	Ln (TA)
Mean	0.02652	0.263080	0.19560	0.070561	14.28920
Median	0.02110	0.263300	0.024600	0.032200	14.68214
Maximum	0.031000	0.440700	0.480000	0.277400	15.72666
Minimum	0.012500	0.106700	0.072500	0.011900	10.88358
Standard deviation	0.007375	0.092222	0.124430	0.081687	1.985723
Skewness	0.536578	0.027120	0.348003	1.548395	−0.451650
Kurtosis	1.644040	2.512120	3.166743	4.062090	1.988132
Jarque-Bera	1.551247	0.150606	0.747614	6.698839	1.781938
Probability	0.354441	0.927463	0.516688	0.035105	0.482345
Sum	0.263000	3.946200	3.501100	1.058410	199.8880
Sum square deviation	0.000874	0.119067	0.120716	0.093418	31.90323
Observations	15	15	15	15	15

Source : Researchers computation, ROA: Return on asset, ROE: Return on equity, NPLR: Non-performing loan ratio, TLAR: Total loans and advances ratio

tailed with Skewness that ranged between 1.54 and −0.45 and peakedness of between 4.06 and 1.64.

4.2.2. Test for stationarity

To ensure that the parameters estimated are stationary (stable over time) we utilized the Augmented Dickey-Fuller (ADF). At lag of one Table 3 indicates that for all our variables, the probability values for our five standard criteria (Levin, Lin and Chu In Pesaran and Shin W-stat, ADF - Fisher Chi-square and PP - Fisher Chi-square) are all <5% critical value. Therefore, we reject the null hypotheses that our variables have unit root (are not stationary), and accept the alternate hypotheses that our variables have no unit root (are stationary).

4.3. Test of Hypothesis

Test of hypothesis one (H_1) which states that credit risk management has no positive and significant impact on total loans and advances of the selected deposit money banks in Nigeria.

From the Table 4, our explanatory variable, NPLR, has positive and non-significant impact on total loans and advances of selected Nigerian deposit money banks. This was explained by the positive coefficient value of our explanatory variable and the corresponding probability value of the t-statistic 0.0658, which is >5% critical

value. The R^2 is the summary measure that tells us how well the sample regression line fits the data. From the model above, R^2 of 0.52 means that 52% variation in TLAR was explained by a change in NPLs, and the remaining 48% was explained by variables not included in the model. The overall regression is confirmed to be significant as indicated by the p-value of the F-statistics. Durbin-Watson (DW) statistic approximate value of 2.39 shows there is a trace of negative serial autocorrelation. The null hypothesis is rejected while the alternate hypothesis accepted. This implies that credit risk management has a positive but non-significant impact on total loans and advances of deposit money banks in Nigeria.

Test of hypothesis (H_2) two which states that Credit risk management has no positive and significant impact on ROA of the selected deposit money banks in Nigeria.

From the Table 5, our independent variable, NPLR has positive and non-significant impact on the ROAs of the selected deposit money banks. This was explained by the positive coefficient value of our independent variable and the corresponding probability value of the t-statistic 0.3601, which is greater than critical value of 0.05. The R^2 is the summary measure that tells us how well the sample regression line fits the data. From the model above, R^2 of 0.60 means that 60% variation in ROAs was explained by a change in NPLs, and the remaining 40% was explained by variables not included in the model. The overall regression is confirmed to be significant as indicated by the p-value of the F-statistics ($P = 0.0117$). Durbin Watson statistics (DW) approximate value of 2.33 shows that there is a trace of negative serial autocorrelation. The null hypothesis is not accepted while the alternate hypothesis is not rejected. This implies that credit risk management has a positive and non-significant impact on the ROA of deposit money banks in Nigeria.

Test of hypothesis three (H_2) which states that Credit risk management has no positive and significant impact on ROE of the selected deposit money banks in Nigeria.

From the Table 5, our independent variable, NPLR, has positive and non-significant impact on the profitability of Nigerian deposit money banks. This was explained by the positive coefficient value of our independent variable and the corresponding probability value of the t-statistic 0.61, which is >0.05 critical value.

The R^2 is the summary measure that tells us how well the sample regression line fits the data. From the model above, R^2 of 0.58 means that 58% variation in ROE was explained by a change in NPLs, and the remaining 42% was explained by variables not included in the model. The overall regression is confirmed to be significant as indicated by the p-value of the F-statistics. Durbin-Watson statistics (DW) approximate value of 2.21 shows that there is a trace of negative serial autocorrelation. The null hypothesis is rejected while the alternate hypothesis is accepted. This implies that credit risk management has a positive and non-significant impact on the ROE of deposit money banks in Nigeria.

4.4. Implications of Results

This study examined the impact of credit risk management on the performance of Nigeria banks from 2000 to 2014.

Table 3: Pool unit root test

Pool unit root test: Summary				
Series: ROA, TLAR, NPLR, Log (TA), ROE				
Sample: 2005 2014				

Exogenous variables: Individual effects
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0–1
Newey–West automatic bandwidth selection and Bartlett
kernel

Method	Obs	Cross sections	t-stat	Prob**
Null: Unit root (assumes common unit root process)				
Levin, Lin and Chu t*	20	3	−6.01165	0.0000
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	20	3	−2.47422	0.0076
ADF - Fisher Chi-square	20	3	18.4432	0.0051
PP - Fisher Chi-square	20	3	28.3339	0.0001

Source: Researcher's eviews results, ROA: Return on asset, ROE: Return on equity, NPLR: Non-performing loan ratio, TLAR: Total loans and advances ratio

Table 4: Regression result of hypothesis one

Dependent				
variable: TLAR				
Method: Least squares				
Date: 08/9/16 time: 14:52				
Sample: 2000 2014				
Included observations: 15				

Variable	Coefficient	Standard error	t-statistic	Prob.
C	0.074144	0.263357	0.281534	0.7831
NPLR	0.062433	0.344571	0.471408	0.0658
NLTA	0.013345	0.018945	0.704397	0.4946
R-squared	0.523424	Mean dependent var	0.263080	
Adjusted R-squared	0.466005	S.D. dependent var	0.092222	
S.E. of regression	0.097424	Akaike info criterion	−1.642634	
Sum squared resid	0.113897	Schwarz criterion	−1.501024	
Log likelihood	15.31976	Hannan-Quinn criter.	−1.644143	
F-statistic	0.272371	Durbin-Watson stat	2.390369	
Prob (F-statistic)	0.026155			

Source: Researcher's Eviews Results, ROA: Return on asset, ROE: Return on equity, NPLR: Non-performing loan ratio, TLAR: Total loans and advances ratio, NLTA: Natural log of total asset

Table 5: Regression result of hypothesis two

Dependent variable: ROA				
Method: Least squares				
Date: 08/9/16 time: 14:52				
Sample: 2000 2014				
Included observations: 15				

Variable	Coefficient	Standard error	t-statistic	Prob.
C	0.0574127	0.017132	3.031492	0.0025
NPLR	0.019988	0.023425	0.761743	0.3601
NLTA	−0.003484	0.001132	−2.816775	0.0143
R-squared	0.6020197	Mean dependent var	0.024267	
Adjusted R-squared	0.432179	S.D. dependent var	0.008385	
S.E. of regression	0.005318	Akaike info criterion	−7.107776	
Sum squared resid	0.000348	Schwarz criterion	−6.966166	
Log likelihood	41.30032	Hannan-Quinn criter.	−7.109285	
F-statistic	5.202117	Durbin-Watson stat	2.331326	
Prob (F-statistic)	0.011721			

Source: Researcher's Eviews results, NPLR: Non-performing loan ratio, NLTA: Natural log of total asset

Following a detailed cross sectional data analysis, the findings revealed plausible results on the economic growth parameter. The implications of these findings are discussed in line with the objectives of this study.

As revealed from the finding of this study, credit risk management has a positive and significant impact on total loans and advances of the selected deposit money banks in Nigeria. Also a cursory examination revealed that the rate of

Table 6: Regression result of hypothesis three

Dependent variable: ROE Method: Least squares Date: 08/9/16 Time: 14:52 Sample: 2000 2014 Included observations: 15				
Variable	**Coefficient**	**Standard error**	**t-statistic**	**Prob.**
C	0.631413	0.263343	2.356374	0.0411
NPLR	0.124922	0.322369	0.344261	0.6166
NLTA	−0.044895	0.019951	−1.949534	0.0550
R-squared	0.581227	Mean dependent var	0.173353	
Adjusted R-squared	0.401294	S.D. dependent var	0.113640	
S.E. of regression	0.110598	Akaike info criterion	−1.349148	
Sum squared resid	0.106315	Schwarz criterion	−1.227538	
Log likelihood	14.04361	Hannan-Quinn criter.	−1.330657	
F-statistic	1.427836	Durbin-Watson stat	2.216513	
Prob (F-statistic)	0.016207			

Source: Researcher's Eviews results, NLTA: Natural log of total asset

penetration of credit management by financial institutions as selected within the region contributes to 6% of NPLs. This implies that on the average about 6% of the total loans and advances constituted irrecoverable loans which is bad and considered as losses. Several reasons may have been behind the dismal performance. Top among these reasons is high incidence of business failures. Bobakovia (2003) asserts that the profitability of a bank depends on its ability to foresee, avoid and monitor risks, possible to cover losses brought about by risk when arisen. This has the net effect of increasing the ratio of substandard credits in the bank's credit portfolio and decreasing the bank's profitability(Mamman and Oluyemi, 1994). The bank supervisors are well aware of this problem, it is however very difficult to persuade bank managers to follow more prudent credit policies during an economic upturn, especially in a highly competitive environment. They claim that even conservative managers might find market pressure for higher profits very difficult to overcome.

As revealed from the Tables 5 and 6, credit risk management has a positive and significant impact on profitability of the selected deposit money banks in Nigeria. Also a cursory examination revealed that the rate of penetration of credit risk management by the selected financial institutions within the region contributes to 2% of returns generated from the assets of these banks within the period (2000–2014). This implies that on the average about 2% of the total returns on investment was generated through the assets. Although, the result from the hypothesis tested indicates that Credit risk management had positive and significant impact on profitability, compared to other regions several reasons may have been behind the dismal returns on assets. Top among these reasons is high incidence of NPLs. However, according to IMF (2013), the banking sector time series (including that for the NPLs) have recent and fundamental structural breaks due to the major consolidation since 2005–06, and the significant changes in the structures of the banks' balance sheets following their surrender of bad assets.

As shown on Table 2, the mean of ROE from 2000 to 2014 period of our study is 26% which is relatively fair as yearly returns to owners' capital. The consolidation challenges and global economic meltdown were part of factors which contributed to low returns on equity. The result of our hypothesis indicated that credit risk had a positive and non-significant impact on ROE. Loans should be made available only to borrowers who are likely to be able to repay and who are unlikely to become insolvent. Credit analysis of potential customers is carried out in order to judge the credit risk with the borrower and to reach lending decisions. Loan payments are monitored and action taken when a customer defaults. Ahmed et al. (1998) in their study found that loan loss provision has a significant positive influence on NPLs. Therefore, an increase in loan loss provision indicates an increase in credit risk and deterioration in the quality of loans consequently affecting bank performance adversely.

5. CONCLUSION

The findings from the specific objectives of this study are that credit risk management had a positive and non-significant impact on total loans and advances, the ROA, ROE of the selected deposit money banks in Nigeria. In line with the findings of this study, we recommend bank managers need to put more efforts to the credit risk management by critically evaluating borrowers' ability to pay back. There is need to strengthened bank lending policy through effective and efficient regulatory supervision and monitoring when facility is given out especially during utilization of the facility by the borrower. Banks should try as much as possible to strike a balance in their loan pricing decisions. This will help them to be able to cover cost associated with lending and at the same time, maintain good banking relationship with their borrowers.

REFERENCES

Abdullahi, S.R. (2013), Efficacy of credit risk management on the performance of banks in nigeria a study of union bank PLC

(2006-2010). Global Journal of Management and Business Research Administration and Management, 13(4), 173-199.

Adeusi, S.O., Akeke, N.I., Adebisi, O.S., Oladunjoye, O. (2013), Risk management and financial performance of banks in Nigeria. Journal of Business and Management, 14(6), 113-126.

Ahmad, N.H., Ariff, M. (2007), Multi-country study of bank credit risk determinants. International Journal of Banking and Finance, 5(1), 135-152.

Ahmed, A.S., Takeda, C., Shawn, T. (1998), Bank Loan Loss Provision: A Re-examination of Capital Management and Signaling Effects, Working Paper, Department of Accounting, Federal Ministry of Finance.

Al-Khouri, R. (2011), Assessing the risk and performance of the GCC banking sector. International Journal of Finance and Economics, 65, 72-78.

Ariffin, N.M., Kassim, S.H. (2009), Risk Management Practices and Financial Performance of Islamic Banks: Malaysian Evidence. Being a Paper presented at the 8th International Conference on Islamic Economics and Finance. Abuja. p15-20.

Bakpo, F.S., Kabari, L.G. (2009), Credit risk evaluation system: An artificial neural banking sector. Far East Journal of Marketing and Management, 9, 145-166.

Ben-Naceur, S., Omran, M. (2008), The Effects of Bank Regulations, Competition and Financial Reforms on MENA Banks' Profitability, Economic Research Forum Working Paper No. 44. p88-93.

Bikker, J.A. (1999), Efficiency in the European Banking Industry: An Exploratory Analysis to Rank Countries. (Research Series Supervision No. 18). Amsterdam: De Nederlandsche Bank. p55-69.

Boahene, S.H., Dasah, J., Agyei, S.K. (2012), Credit risk and profitability of selected banks in Ghana. Research Journal of Finance and Accounting, 16, 19-33.

Bobakovia, I. (2003). Raising the profitability of commercial banks, BIATEC, s.l.: Národná Banka Slovenska.

Broll, U., Pausch, T., Welzel, P. (2002), Credit Risk and Credit Derivatives in Banking. Volks Wirtschaftliche Diskussionsreihe, Beitrag Nr. 228. Vol. 4. Augsburg: Institutf¨ur Volks Wirtschaftslehre, Universit¨at Augsburg. p36-61.

Bruner, C.M. (2010), Corporate governance reform in a time of crisis. The Journal of Corporate Law, 36(2), 15-23.

Drucker, P.F. (1977), Management-An Abridged and Revised Version of Management: Tasks, Responsibilities, Practices. London: Pan Books.

Epure, M., Lafuente, I. (2012), Monitoring Bank Performance in the Presence of Risk. Barcelona GSE Working Paper Series No.61. p44-52.

Fredrick, O. (2010), The impact of credit risk management on financial performance of commercial banks in UK. Applied Financial Economics, 13(8), 565-571.

Hagel, J., Brown, J.S., Davison, L. (2010), The Best Way to Measure Company Performance. Harvard Business Review. Available from: https://www.hbr.org/2010/03/the-best-way-tomeasure-compan.html. [Last accessed on 2015 Oct 20].

Hakim, S., Neamie, S. (2001), Performance and Credit Risk in Banking: A Comparative Study of Egypt and Lebanon. ERF Working Paper Series, Working Paper No. 0137. p21-32.

Hillson, D. (2002), What is Risk? Towards a Common Definition, Journal of the Institute of Risk Management, p11-12. Available from: http://www.risk-doctor.com/pdf-files/def0402.pdf. [Last retrieved on 2014 Apr 22].

Hillson, D. (2006), Integrated Risk management as a Framework for Organization Success. Seattle USA: PMI Global Conference Proceedings. Available from: http://www.risk-doctor.com/pdf-files/adv13.pdf.

Hillson, D.A., Murray-Webster, R. (2011), Using risk apetite and risk attitude to support appropriate risk taking: A new taxonomy and

model. Journal of Project, Program and Portfolio Management, 2(1), 29-46.

Hosna, A., Manzura, B., Juanjuan, S. (2009), Credit risk management and profitability in commercial banks in Sweden. School of Business Economics and Law, Available from: http://www.srr.com/article/fraud-risk-management-banking-industry.

Idowu, A.A., Awoyemi, S. (2012), The impact of credit risk management on the commercial banks performance in Nigeria. International Journal of Management and Sustainability, 3(5), 295-306.

Jackson, O. (2011), The Impact of Credit Risk Management on Financial Performance of Commercial Banks in Kenya, MBA Unpublished Research Project, University of Nairobi.

Kaye, B., Lowe, S.W. (2010), Risk Management. London: The Chartered Insurance Institute.

Kannan, N., Thangavel, N. (2008), Risk management in the financial services industry. Academic Open Internet Journal, 22(7), 1-20. Available from: http://www.acadjournal.com/2008/V22/part7/p1/. [Last retrieved on 2014 Apr 14].

Kargi, H.S. (2011), Credit risk and the performance of Nigerian banks. A study of GTB PLC (1991-2010). Journal of Business Research Administration, 3(2), 112-119.

Kim, D., Santomero, A.M. (1998), Regulation of bank capital and portfolio risk. Journal of Finance, 35(5), 142-156.

Kithinji, A.M. (2010), Credit Risk Management and Profitability of Commercial Banks in Kenya. Nairobi: School of Business, University of Nairobi.

Kolapo, T., Ayeni, R., Kolade, R., Ojo, M. (2012), Credit risk and commercial banks' performance in Nigeria: A panel model approach. Australian Journal of Business and Management Research, 2(2), 31-38.

Kosmidou, K.Z. (2008), The determinants of banks' profits in Greece during the period of EU financial integration. Managerial Finance, 34(3), 146-159.

Li Y. (2007), Determinants of Banks Profitability and its Implication on Risk Management Practices: Panel Evidence from the UK, University of Nottingham.

Mamman, H., Oluyemi, S.A. (1994), Bank's Management issues and restoring the health of nigerian banks through improving the quality of management/ employee, NDIC Quarterly, 4(4), 57-68.

Meulbroek, L. (2002), The promise and challenges of integrated risk management. Risk Management and Insurance Review, 5(1), 55-56.

Muhammed, A., Muhammed, A., Muhammed, N., Shahid , A.S., Shahid , M., Tahseen-Ul-Ahad, F.A. (2012), Credit risk and the performance of Nigerian banks. Interdisciplinary Journal of Contemporary Research in Business, 4(7), 49-63.

Musyoki, D., Kadubo, A.S. (2011), The impact of credit risk management on the financial network approach. Nigerian Journal of Technology, 28(1), 112-134.

Nigerian Deposit Insurance Corporation. (2009), Annual Reports and Accounts of Banks submitted to NDIC.

Nocco, B.W., Stulz, R.M. (2006), Enterprise risk management: Theory and practice. Journal of Applied Corporate Finance, 18(2), 8-20.

Olajide, S.F. (2013), Risk management and risk management failure: Lessons for business enterprises. International Journal of Academic Research in Business and Social Sciences, 3(2), 56-78.

Olalekan, A., Adeyinka, S. (2013), Capital adequacy and banks' profitability: An empirical evidence from Nigeria. American International Journal of Contemporary Research, 3(10), 102-115.

Onaolapo, A.R. (2012), Analysis of credit risk management efficiency in Nigerian commercial banking sector. Far East Journal of Marketing and Management, 4(3), 114-119.

Poudel, R.P.S. (2012), The impact of credit risk management in financial performance of practices: Panel evidence from the UK. University

of Nottingham, 6(3), 36-41.

Protiviti Inc. (2006), Guide to Enterprise Risk Management: Frequently Asked Question. Available from: http://www.knowledgeleader.com/KnowledgeLeader/Content.nsf/dce93ca8c1f384d6862571420036f06c/87e5c452010aadc9882571c00081a23c/$FILE/ERM%20FAQ%20Guide.pdf. [Last accessed on 2007].

Rivard, R.J., Thomas, C.R. (1997), The effect of interstate banking on large bank holding company profitability and risk. Journal of Economics and Business, 49(1), 61-76.

Saunders, S., Cornett, T. (2007), Financial Markets and Institutions; An Introduction to the Risk Management Approach. New York: McGraw Hill Pub.

Schroeck, G. (2002), Risk Management and Value Creation in Financial Institutions. New York: John Wiley and Sons, Inc.

Soyemi, K.A., Ogunleye, J.O., Ashogbon, F.O. (2014), Risk management practices and financial performance: Evidence from the Nigerian deposit money banks (DMBs). The Business and Management Review, 4(4), 1-37.

Tandelilin, E., Kaaro, H., Mahadwartha, P.A., Supriyatna, S. (2007), Corporate Governance, Risk Management and Bank Performance: Does Type of Ownership Matter? EADN Working Paper No. 34.

Yang, C. (2012), Service, investment, and risk management performance in commercial banks. The Service Industries Journal, 32(12), 2005-2025.

Zahangir, A., Masukujj, A. (2011), Risk management practices: A critical diagnosis of some selected commercial banks in Bangladesh. Journal of Business and Technology, 4(1), 13-35.